UNIVERSITY OF GONDAR

COLLEGE OF MEDICINE AND HEALTH SCIENCE

INSTITUTE OF PUBLIC HEALTH

KNOWLEDGE OF MOTHER'S ON MOTHER TO CHILD TRANSMISSION OF HIV AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN IN MEKET DISRTICT, NORTHEAST ETHIOPIA.

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ARV	Anti-retro-Viral
BSC	Bachelor of Science
CI	Confidence Interval
ETB	Ethiopia Birr
HH	House Hold
HIV	Human Immunodeficiency Virus
IQR	Inter-quartile Range
MTCT	Mother-To-Child Transmission
OR	Odds Ratio
PITC	Provider Initiating Testing and Counseling
PMTCT	Prevention of Mother-To-Child Transmission
PTCT	Parent Child Transmission
SD	Standard Deviation
SNNPR	South Nations Nationalities and Peoples Region
SPSS	Statistical Package for Social Science
VCT	Voluntary Counseling and Testing

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Abstract

Background: Vertical transmission of HIV is still a major challenge in developing countries, including Ethiopia. Knowledge on the three possible periods of mother-to-child transmission (MTCT) of HIV shows a direct outcome on the reduction of child mortality. However, there are facility based studies on knowledge of mothers about MTCT of HIV and associated factors among pregnant women but no community based study in Ethiopia, particularly in the study area.

Objective: To assess the knowledge of mothers on mother-to-child transmission of HIV and associated factors among pregnant women.

Methods: A cross-sectional community based study was conducted in Meket District from March 8-21, 2014.Trained data collectors using structured interview questionnaire were employed. A total of 542 pregnant women were involved in the study by using stratified sampling technique. Data were entered into Epi-info version 3.5.3 and then transferred to SPSS 20 for further analysis. Binary logistic regression model was used. P-value with 95% CI and Odds Ratio were computed to determine factors associated with the outcome variable. Hosmer-Lemeshow goodness-of-fit test was used to check and determine the final model.

Results: Five hundred and forty two respondents participated in the study with 97.5% response rate. Nineteen percent of them had good knowledge of mothers on mother to child transmission of HIV. Urban residence [AOR:2.69 (1.481, 4.873)], able to read and write [AOR: 3.25(1.554, 6.799)], primary education [AOR:2.41 (1.035, 5.602)], information on HIV from health professionals [AOR:3.24 (1.538, 6.832)],discussion with male partners on ANC [AOR:5.80 (2.633, 12.776)], and MTCT [AOR:2.64 (1.590, 4.391)], were factors associated with good knowledge of mothers on MTCT of HIV.

Conclusion and recommendation: Good Knowledge of pregnant mothers on mother-to-child transmission of HIV was low. It is significantly associated with residence, education, mothers who received information on HIV from health care providers and discussion on ANC and MTCT with partners. Local health authorities' should consider consistent and male involved health education program to raise the level of knowledge of mothers on mother-to-child transmission of HIV.

Key words: Knowledge, pregnant women, HIV, associated factors, Meket, Ethiopia.

1. Introduction

1.1 Statement of the problem

Vertical transmission of HIV is still a major challenge in the world, especially in the developing countries (1). A report in 2012 estimated 35.3 million people are living with HIV and 2.3 million new infections, including an estimated 3.3 million less than 15 years, Worldwide, there are about 6,300 new infections and 700 HIV-related deaths daily in 2012. Sub-Saharan Africa remains the region most heavily affected by HIV about more than 90% (2).

Without any intervention, the risk of a baby getting HIV infection from an infected mother ranges from 15% to 25% in the developed nations and 25% to 35% in the developing countries. HIV transmission rate and timing is estimated to be 5%to10% during pregnancy, 10% to 15% during delivery and 5% to 20% through breast feeding. In general mother to child transmission contributes for15-45% of HIV acquisition.

The national adult HIV prevalence in Ethiopia was 1.2% (3).The national accelerated emergency plan includes three targeted objectives reaching 90% of pregnant women with access to antenatal care services, ensuring that all pregnant women have access to delivery by a skilled attendant and providing antiretroviral prophylaxis to at least 80% of HIV-positive pregnant women. Estimated of138, 906 children (< 15 years) living with HIV in 2014. There are estimated 3,886 new infections each year with HIV through mother to child transmission (3).However, timely interventions can possibly reduced to2-5% (4-6).

There is a Global target to be achieved in the year 2015 with elimination of new HIV infections among children and keeping their mothers alive and WHO promotes a four pronged approach to reduce mother to child transmission of HIV.PMTCT program has been initiated in Ethiopia in 2003 (4, 6, 7).Thus, full knowledge of mothers on MTCT of HIV considered as a precondition to achieve this target. As far as my knowledge concerned; there are few studies about the knowledge of mothers on MTCT of HIV and its associated factors among pregnant women with community based design in the country as well as in the study area. Therefore, the purpose of this research is to assess the knowledge of mothers on MTCT of HIV and associated factors among pregnant women in the study area.

1.2 Literature review

Knowledge on MTCT:

The prevention of mother-to-child transmission (MTCT) of HIV is depending on the knowledge of the mother on the timing of the three possible periods and the involvement of their partners. However, knowledge of mothers on MTCT of HIV varies through country to country, even not measured in Ethiopia at community level.

A study in China showed that 64% pregnant women attending ANC in three clinics of three Hospitals know about mother-to-child transmission. Vaginal delivery and breastfeeding were identified as routes of transmission from mother to child by 60% and 20%, respectively (8).

A study in South Africa revealed that 49.1% could explain about what MTCT means, 44% stated that HIV transmission through breast feeding but 33% did not know what it is (9). The highest reported timing of transmission in Ghana 90%,81.1%, 98.4%of MTCT could be during pregnancy, during delivery and through breastfeeding respectively (10). Across-sectional study conducted in Uganda among mothers attending antenatal clinics 80% know about mother to child transmission of HIV. However, 12% of them thought no chance of possibility of MTCT of HIV to the unborn baby, and the remaining 8% did not know whether mother to child transmission or not (11).

A study conducted in Cano, Nigeria a significantly lower proportion of the respondents identified vaginal delivery and breast feeding as a route of HIV transmission, 39%and 53% respectively (12).

A cross-sectional study in Southern Ethiopia among antenatal attending mothers 88.5% of them know at least what is mother to child transmission of HIV and 11.5% of them have full knowledge on MTCT of HIV (13). In the case of the three possible periods of mother-to-child transmission of HIV 48.4%of mothers respond during pregnancy, 58.6% during delivery and 40.7% breast feeding. But 14.9% of the respondents did not mention any of the correct timing of MTCT of HIV. Studies in Dile Chora and Hawassa referrals Hospitals/Ethiopia pregnant mothers attending ANC clinic 90.1%and 79.5% were know MTCT of HIV respectively (14, 15).

Institution based study in Gondar Town revealed that 88.5%know about MTCT of HIV and only 8.5% of study subjects have full knowledge on MTCT of HIV. As to the timing of HIV transmission, 35.9% of mothers said it occurs during pregnancy, 33.6% of

mothers responded that it occurs during labor and 24.9% of respondents reported that it occurs during breast feeding (16).

In general, most of the studies in different regions revealed that knowledge about mother to child transmission of HIV highest in Hospital based studies and others are relatively lower. Majority of these studies did not measure good knowledge of MTCT of HIV by considering the three possible periods of transmission. A study in Southern Ethiopia used a cut-of-point when a mother correctly reported of the three possible periods of MTCT of HIV considered as full knowledge on it.

Associated factors for knowledge on mother to child transmission of HIV

Socio-demographic:

Age and Marital status:

A study in western Nigeria revealed that no statistically significant difference with the knowledge of the teenage pregnant women with compared to older one about mother to child transmission of HIV(17). A study in Eretria revealed that when age increases knowledge of women on MTCT of HIV also increases (18). In contrast, a study in Gondar town revealed that older women (35-49 years) were less knowledgeable than teenagers on MTCT of HIV (16).

Educational status

A study in China respondents with higher educational level was more knowledgeable than the lower educational level (8).In Sudan, education level of secondary and above women was more knowledgeable towards mother to child transmission of HIV (19).A study conducted in Gondar Town, women with education of secondary and above was7 times more likely knowledgeable on MTCT of HIV than those with no education (16).

Residence

Women living in the urban settings were about 2.46 times more likely to have better knowledge on MTCT of HIV than women who live in the rural residents in Gondar town (16).

Occupation

Study done in Southern Ethiopia indicated that there were a statistically significant difference between the knowledge of mothers on MTCT of HIV and their occupation. Women within Government employee, students and daily laborer were more knowledgeable than housewife (13).

Obstetric conditions:

Gravidity and parity

A study in Hawassa referral Hospital revealed that Multi-parous women had about three times more knowledgeable on MTCT of HIV/AIDS than nulli-parous (15).

Gestational age and Number of antenatal care visits:

Antenatal care follow up during last pregnancy had positive association with knowledge of mothers on MTCT of HIV in Hawassa/Ethiopia (15). Moreover, a study in Northwest Ethiopia, Gondar,(16)ANC during last pregnancy, number of ANC visits for the current

pregnancy revealed significant association with full knowledge of mothers on MTCT of HIV.

Information received from service provider on HIV, MTCT:

A study in SNNPR, information received during ANC was associated with women's knowledge. Women who did not receive information on MTCT of HIV from ANC service providers during their last pregnancy presented were less knowledgeable than having information on MTCT of HIV (13).

Male partner's characteristics:

Male partner discussion on HIV, MTCT with a woman during pregnancy

A cross-sectional study in Southern part of Ethiopia discussions on antenatal care (ANC) and HIV/AIDS with male partners was found to have an effect on good knowledge of mothers on MTCT of HIV. Respondents who did not have discussion on HIV with their male partner during their last pregnancy were less knowledgeable on MTCT of HIV (13).

In general residence in Gondar (16), education and occupation in Southern Ethiopia (13) and antenatal visit of four and above in Hawassa, Ethiopia, (15) showed statistically significant association with the good knowledge of mothers on mother to child transmission of HIV. In the other way, women's age, marital status, parity, gravidity and monthly income, and gestational age didn't show statistical significant association.

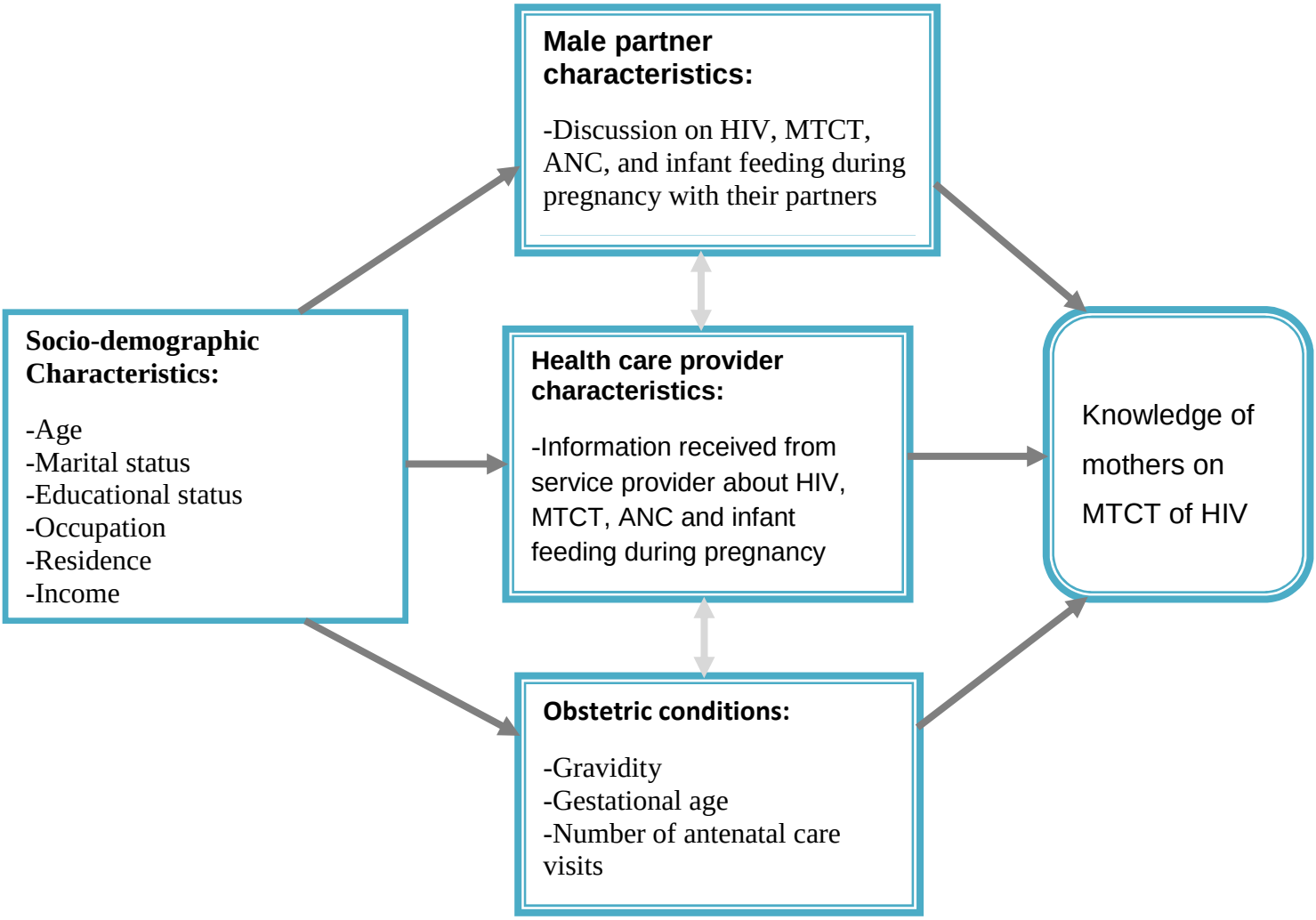

Figure1: conceptual framework: for knowledge of mothers on MTCT of HIV and associated factors among pregnant women, Meket District, Northeast Ethiopia, 2014.

1.3 Justification of the study

Vertical transmission of HIV is still a major challenge in developing countries including Ethiopia (1). Mainly the control of this confronting problem rolled on the hand of the mother by early screening and treatment with ARVs and the involvement of their partners.

There is a Global target to be achieved in the year 2015 with elimination of new HIV infections among children and keeping their mothers alive and WHO promotes a four pronged approach to reduce mother to child transmission of HIV (1).However, still pregnant women who received ARVs for PMTCT purpose in Ethiopia are low. To realize these ambitious plan and implementation strategy, the Knowledge of the mother on MTCT of HIV is a precondition. Knowledge of mothers on MTCT of HIV needs an investigation at community level within women's inhabitants.

There are few institution based studies in Ethiopia; however no community based studies particularly in the study area. Therefore, the purpose of this study aimed at to assess the knowledge of mothers on MTCT of HIV and associated factors among pregnant women in the District. Finally, this study will be articulate recommendations to enable the responsible bodies to design strategies with local contexts to improve the knowledge of mothers. .

2. Objective

2.1 General objective

To assess knowledge of mother's on mother-to-child transmission of HIV and associated factors among pregnant women in Meket District, Northeast Ethiopia, 2014.

2.2 Specific objectives

To determine knowledge of mother's on mother to child transmission of HIV among pregnant women.

To identify factors associated with knowledge of mothers on mother to child transmission of HIV among pregnant women.

3. Materials and Methods

3.1 Study design

A community based cross-sectional study design was conducted.

3.2 Study area and period

The study was conducted in Meket District from March8 to 21, 2014. Meket is located 665 km North of Addis Ababa. This District shares border with Dawunt, Tach Gaynt in the Southern, Gidan and Gubalafito in the Northeast, laygaynt in the West, and Lasta in the Northern directions. It is the largest Woreda from 13 districts in North wollo. An estimated population size about 254,520 with expected reproductive age groups about 59,939, around 8,246 pregnant women by using the conversion factors from health office and 320 women on pre-ART and on ART. The District has 45 rural and 2 urban Kebeles having an area of 1919.59 square kilometers. There are 139 health professionals (nurses, midwifes, health officers, laboratory and pharmacy technicians), 98 rural and 3 urban health extension workers, and 10 health centers, 47 health posts. The District has potential health coverage of 90%. All these health centers give the PITC, VCT and PMTCT services. In the selectedkebeles598 pregnant women were listed by Health Extension Workers in each kebele (20).

3.3. Source and Study population

Source population

The source population was pregnant women living in Meket District.

Study population

Those pregnant women were live in the selected kebeles.

3.4 Inclusion and exclusion criteria

Inclusion criteria

Pregnant women lived in the selected kebeles at least about 6 months.

Exclusion criteria

Pregnant mothers who seriously sick during the study period and who was not permanent residence in the District.

3.5 Sample size and sampling procedure

3.5.1 Sample size determination

The sample size (n) is determined by using the single population proportion formula.

$n= \frac{(Z\frac{\alpha}{2})^2 * p(1-P)}{(d)^2}$ with the following assumptions:

n= required sample size.

Z= Reliability coefficient at 95% confidence level.

P=Proportion of target population which have good knowledge of MTCT. It was taken from previous study done in Southern Ethiopia. The proportion found to be 12%(13).
d= margin of error.

Design effect=2

Possible non response rate during the actual data collection was assumed = 10%.

$n=\frac{(1.96)^2 * 0.12(1-0.12)}{(0.04)2}$, $n=\frac{(1.96)^2 * 0.12(1-0.12)}{(0.04)2}$ = 253= (253+253*0.1)2 =556. Hence, the final sample size (n) is 556.

Sample size determination for the second objective:

Table 1: Calculation of sample size for factors associated with knowledge of mothers on MTCT of HIV among pregnant women, Meket District, Northeast Ethiopia, 2014 (15, 21).

variables	assumption	Total sample size
Age	OR=1.84, p=51.4, Ratio1:1, power 80%, CI=95%	189*2=378
ANC during last pregnancy	OR=1.85, p=16,Ratio 1:1, power 80%, CI=95%	276*2=552

Then the final sample size would be 556.

Sampling procedure

Stratified sampling technique was used to select the study participants. In the District there were 47 Kebeles, 2 of them urban and 45 were rural kebeles. All of the urban were taken and 8 from rural kebeles also selected by using lottery method. From those 10 Kebeles in the District 598 pregnant women were listed with health extension workers in each Health Post of those Kebeles. Proportional allocation to a sample size was used to obtain the required sample sizes (n) in each Keble. Seventy nine and 477 pregnant mothers from urban and rural health posts were selected by using lottery method. All of the selected mothers interviewed within two weeks period.

For eligible women who were not found at home for the first time, the interviewers revisited the participant's House at least two times at different time interval and when interviewers failed to get those women or refuse to participate in the study, assume as a non response and continue to interview the next mother.

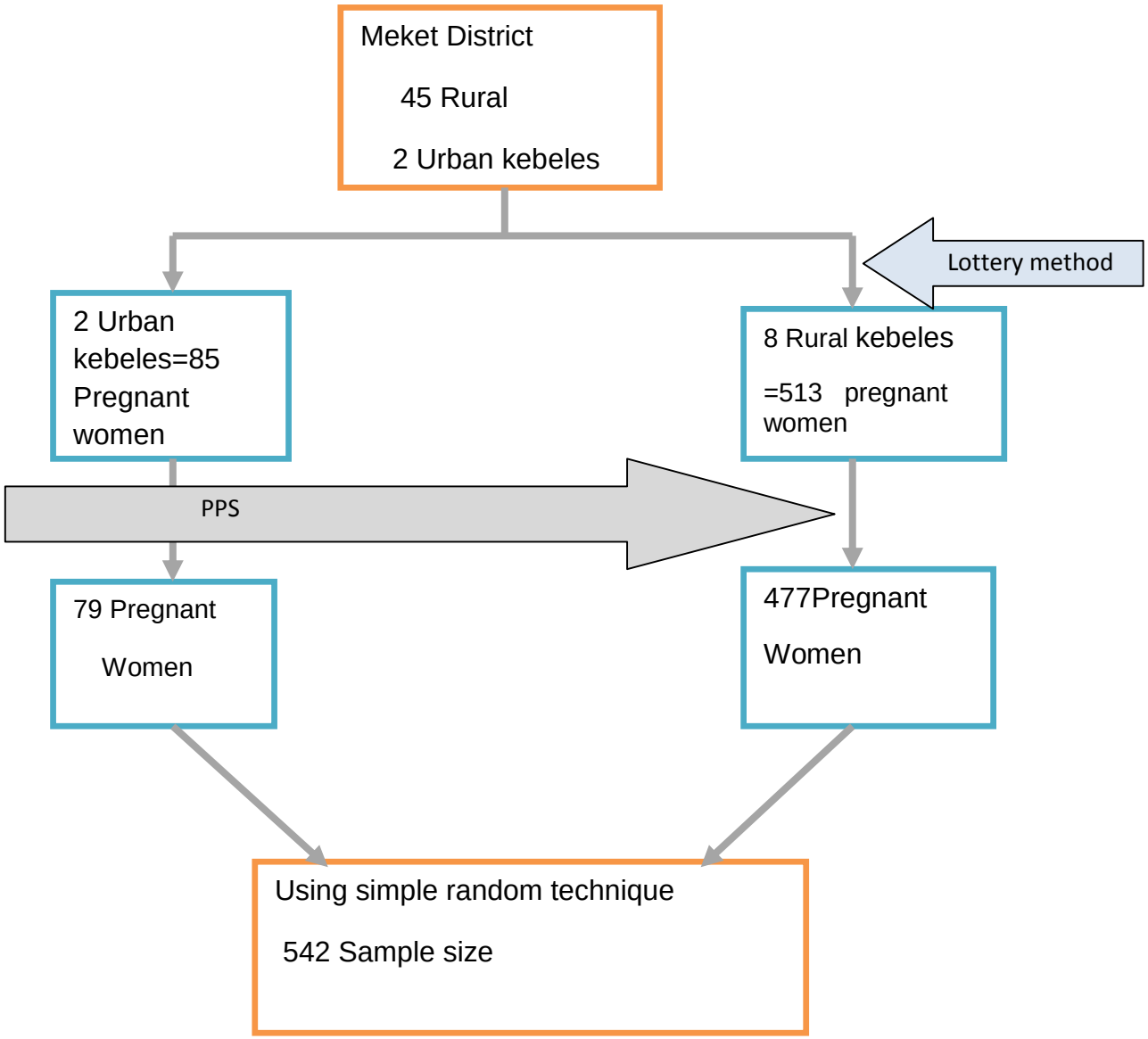

Figure 2: Diagrammatic presentation of sampling procedure: knowledge of mothers on MTCT of HIV and associated factors among pregnant women, Meket District, Northeast Ethiopia, 2014.

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3.6 Study variables:

3.6.1 Dependent variable

Knowledge of mother's on MTCT of HIV

3.6.2 Independent variables

Socio-demographic and economic characteristics:

- Age
- Residence
- Religion
- Marital status
- Educational status
- Occupation
- Income

Obstetric characteristics:

- Gravidity
- Gestational age
- Number of antenatal care visits

Antenatal care service characteristics:

- Information received from service provider about HIV, MTCT, ANC and infant feeding during pregnancy either in the community or in the health care facility.

Male partner's characteristics:

- Discussion on HIV, MTCT, ANC, & infant feeding during pregnancy

3.7 Operational definitions of terms

MTCT: mother to child transmission of HIV from infected women during pregnancy, labor/delivery and breast feeding.

Comprehensive knowledge on HIV/AIDS: By summation of five general knowledge questions about HIV/AIDS and individuals respond all the five questions considered have comprehensive knowledge and answered below five questions have no comprehensive knowledge on HIV/AIDS (16).

Good knowledge on MTCT of HIV: Adding questions on the three possible periods MTCT of HIV. When a mother responded all the three questions on the three possible periods of MTCT of HIV was good knowledge (during pregnancy, during labor/delivery, during breastfeeding) (13, 22).

Poor Knowledge on MTCT of HIV: when a mother reported that two and below two possible periods of mother to child transmission (MTCT) of HIV (pregnancy, labor/delivery, during breastfeeding) (13, 22).

3.8 Data management and analysis

3.8.1 Data collection tools

First, interviewer administered questionnaire prepared in English, translated into Amharic and then back to English to check for consistency by language experts. The data was collected by a face-to-face interview technique with5female nurses using a pre-tested, structured and closed-ended questionnaire. The data collectors supervised by two BSc holder supervisors.

3.8.2 Data quality control

Training was given to the data collectors and supervisors for two days on the purpose, about informed consent, techniques of interview and how to handle the data. Two weeks prior to the start of data collection, perform pre-test on 5% (27) of the sample in similar kebeles that have the same characteristics to the study populations in adjacent district to ensure the validity of the questionnaire. Perform a modification of the questionnaire before conducting collection of the data from the concerned individuals. Supervisors and principal investigator check for completeness and consistency with daily of data collection and timely corrections was made immediately on site with the data collectors about any error and incompleteness before the next day activities started.

3.8.3 Data processing and analysis

The data were entered into EPI info version 3.5.3 statistical software and then cleaned and analyzed by using SPSS version 20 statistical package. Proportion and summary statistics were used to describe the study population. Summation of knowledge on HIV/AIDS and MTCT of HIV was made. By summation of five general knowledge questions about HIV/AIDS and individuals respond all the five questions considered have comprehensive knowledge and answered below five questions have no comprehensive knowledge on HIV/AIDS. By adding questions on the three possible periods of MTCT of HIV and when a mother reported that all questions on the three possible periods of MTCT of HIV was good knowledge on MTCT of HIV. When a mother reported that two and below two possible periods of mother to child transmission have poor knowledge on MTCT of HIV. Both Bivariate and multivariate logistic regression analysis were carried out to see the effect of each independent variable on the dependent variable of good knowledge of MTCT and control cofounding. Odds ratio with 95% CI were computed to determine factors associated with the outcome variables.

3.9 Ethical consideration

Ethical clearance was obtained from institutional review board of University of Gondar, College Of Medicine And Health Science, Institute Of Public Health, and permission letter was secured from Meket District Health Office. Verbal informed consent was taken from each study participants. Information was provided about the purpose and benefit of the study. The participants were told about their rights to withdraw from the study at any time when they want. Confidentiality of the information was maintained throughout by using anonymity identifiers, keeping their privacy by interviewing them with individually with separate place (with no interference) and use a password for computer. Information related to their sero-status was not being sought.

4. Results

4.1. Socio-demographic characteristics

Five hundred and forty two pregnant women participated in the study with 97.5% response rate. Majority (85.4%) of them were rural dwellers. The mean age was 29.45 years (±SD=5.381). Among those of respondents 326 (60.1%) were between 25-34 years of age group. Four hundred and sixty (84.9%) of them were married, 196 (36.2%) able to read and write, nearly four fifth (80.1%) were house wife and 458 (84.5%) of study subjects have monthly income 450 and below. (Table-2)

Table 2: Selected socio-demographic characteristics of respondents, Meket District, Northeast Ethiopia, 2014(542).(n=542)

Variables	Frequency	Percent
Age (Year)		
15-24	99	18.3
25-34	326	60.1
35-49	117	21.6
Residence		
Urban	79	14.6
Rural	463	85.4
Marital status		
Married	460	84.9
Single	27	5
Divorced	55	10.1
Educational status		
Unable to read and write	176	32.5
Able to read and write only	196	36.2
Primary	127	23.4
Secondary and above	43	7.9
Occupation		
House wife	434	80.1
Student	26	4.8
Merchant	55	10.1
Government employee	27	5.0
Income (ETB)		
≤450	458	84.5
451-999	77	14.2
≥1000	7	1.3

4.2 Obstetric characteristics and information received from health care providers

One hundred and seventy four (32.1%) of the study subjects were two times pregnant in their life. More than half 312 (57.6%) of the study participants had ANC visit on the current pregnancy. Nearly two third (63.8%) of the respondents have gotten information on HIV/AIDS from health care providers. (Table-3)

Table 3: Obstetric characteristics and information received from health care providers, Meket District, Northeast Ethiopia, 2014. (n=542)

Variables	Frequency	Percent
Number of pregnancy		
One	160	29.5
Two	174	32.1
Three	103	19
Four	53	9.8
Five and above	52	9.6
Gestational age		
<=16	10	1.9
17-24	134	24.7
25-35	333	61.4
>=36	65	12
Antenatal visit		
Yes	312	57.6
No	230	42.4
Number of ANC visit, n=313		
One	122	39
Two	137	43.8
Three	40	12.8
Four and above	14	4.5
Received information from health care providers		
On HIV		
Yes	346	63.8
No	196	36.2
On antenatal care		
Yes	304	56.1
No	238	43.9
ON MTCT		
Yes	284	52.4
No	258	47.6
On infant feeding		
Yes	181	33.4
No	361	66.6

4.3 Male partner characteristics: Discussion on HIV, ANC, MTCT and infant feeding with their partners.

Respondents discussed about HIV, antenatal care, mother-to-child transmission of HIV, and small proportion of pregnant women about infant feeding with their partners,51.8%, 65.7%,40.6%,and 21.4%, respectively.(n=542).(figure-3)

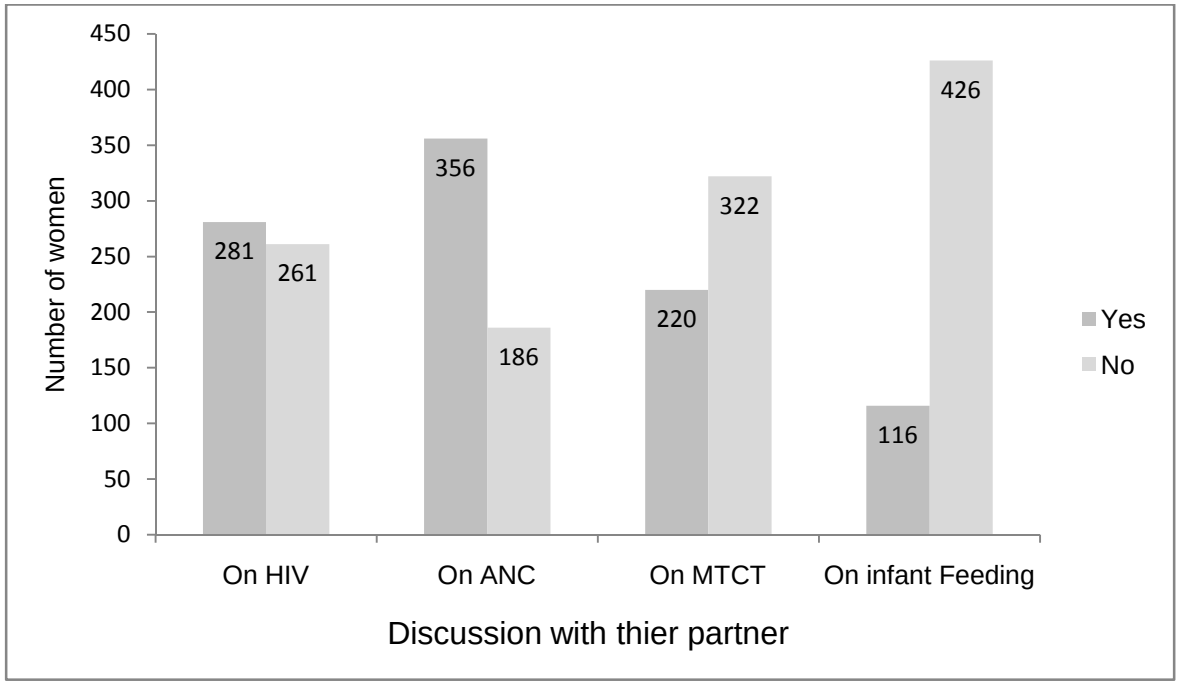

Figure 3: Pregnant women having discussion on HIV, ANC, MTCT and infant feeding with their partners, Meket District, Northeast Ethiopia, 2014. (n=542)

4.4. Pregnant women's Knowledge on the three possible periods of MTCT of HIV

Three hundred and forty six (63.8%) of respondents have comprehensive knowledge on HIV/AIDS as in the general populations. Mothers who know at least what mother to child transmission of HIV mean were 451(83.2%). Majority (59.8%) of respondents answered MTCT of HIV during labor and delivery, 228 (42.1%) pregnant women know at least two means of mother to child transmission of HIV and one hundred and three (19%) of the respondents answered all the three means of mother to child transmission of HIV. (Table-4)

Table 4: Knowledge of mother's on MTCT of HIV among pregnant women, Meket District, Northeast Ethiopia, 2014.(n=542).

Variables	**Frequency**	**Percent**
Comprehensive knowledge of HIVAIDS	346	63.8
Heard of PITC	345	63.7
Pregnant women who know what MTCT means	451	83.2
Know the means transmission of MTCT		
During pregnancy	309	57
During labor/delivery	324	59.8
During breast feeding	251	46.3
Exact timing of MTCT answered by women		
None	92	17
One	119	22
Two	228	42.1
Three	103	19

3.5 Factors associated with knowledge of mothers on MTCT of HIV among pregnant women

In the multivariable analysis residents, mother's educational status and having discussion and information on HIV with health professionals, discussion on MTCT and ANC with their partners were associated with full knowledge of pregnant women on mother to child transmission of HIV. The odds of being having good knowledge of mothers on MTCT of HIV for those who live in urban settings were 2.69 times greater than rural residents [AOR: 2.69, CI(1.481,4.873)]. The odds of having good knowledge of MTCT of HIV among pregnant women who have able to read and write also 3.25 times higher than those of unable to read and write [AOR: 3.25, CI(1.554,6.799)]. Having the odds of good knowledge of mothers on the timing of HIV transmission, primary level education also 2.41 times more likely knowledgeable than unable to read and write [AOR: 2.41, CI (1.035, 5.602)]. Pregnant mothers who received information on HIV from health care providers 3.24 times more likely knowledgeable than women not received information [AOR: 3.24, CI (1.538, 6.832)]. In addition women having discussion on antenatal care visits with partner were also 5.80 more likely knowledgeable than not having discussion with it [AOR: 5.80, CI (2.633, 12.776)], and mothers who were discussed with partners on MTCT 2.642 times more likely knowledgeable than those who have not [AOR: 2.64, CI (1.590, 4.391)].(Table-5)

Table 5: Bivariate and multivariable analysis of factors associated with good knowledge of mothers on MTCT of HIV among pregnant women, Meket District, 2014. (n=542).

Variables	Good Knowledge of MTCT		Crude OR (95%)	Adjusted OR (95%)
	Yes	No		
Residence				
Urban	31	48	3.51(2.092,5.881)	**2.69(1.481, 4.873)****
Rural	72	391	1.0	1.0
Age				
15-24	34	65	1.0	1.0
25-34	56	270	0.40(0.239,0.657)	**0.50(0.270,0.936)**
35-49	13	104	0.24(0.117,0.486)	0.61(0.244,1.502)
Education				
Unable to read and write	13	163	1.0	1.0
Able to read and write	49	147	4.18(2.180,8.013)	**3.25(1.554,6.799)****
Primary	31	96	4.05(2.021, 8.113)	**2.41(1.035,5.602)****
Secondary and above	10	33	3.80(1.537,9.395)	2.05(0.713,5.881)
ANC information from HP				
Yes	84	220	4.40(2.586,7.491)	1.76(0.930,3.315)
No	19	219	1.0	1.0
HIV information from HP				
Yes	92	254	6.09(3.169,11.708)	**3.24(1.538,6.832)****
No	11	185	1.0	1.0
MTCT discussion with husband				
Yes	67	153	3.48(2.218,5.457)	**2.64(1.590,4.391)****
No	36	286	1.0	1.0
ANC discussion with husband				
Yes	95	261	8.10(3.840,17.081)	**5.80(2.633,12.776)****
No	8	178	1.0	1.0

** =statistically significant, Overall P-value for age=0.095 and education=0. 018

5. Discussion

The finding of this study indicated that there was a lower proportion of good knowledge of mothers on mother to child transmission (MTCT) of HIV. Knowledge of mothers on mother to child transmission of HIV has no similar cut-of-points across different studies. A study done in southern, SNNPR, Ethiopia used the three possible timing of mother to child transmission of HIV and if a mother answered all the three possible periods considered as full knowledge on MTCT of HIV and then when two and below assume having some knowledge on MTCT of HIV (13). In this study considered good knowledge as full knowledge and poor knowledge as some knowledge on MTCT of HIV.

This study revealed that 19% of respondents have good knowledge on MTCT of HIV with 95% CI (15.5%, 22.4%). It is in line with a cross-sectional study conducted at Temeke District Hospital, Dar Es Salaam 15.7% (23) and higher than study done in Southern Ethiopia (11.5%) and Gondar town (8.5%) among antenatal attending pregnant women (13, 16). But lower than a health institution based study in Debremarkos town, Ethiopia 42.3%(24) . It may be due to improvement of availability of health care providers in the near mother's dweller. In this study women's responses on each possible periods of MTCT were 57% during pregnancy, 59.8% during delivery and 46.3% through breast feeding and these are lower than studies done in Ghana, Uganda (10, 11). In contrast it was higher than studies in China, India, South Africa, southern Ethiopia and Gondar town (8, 9, 13, 16, 25).This inconsistence might be due to study setting, accessibility of health facilities.

Good knowledge of pregnant women on MTCT of HIV was associated with residence, educational status, discussion and information received from health care providers on HIV and discussion with partners on ANC and MTCT.

In the District, 83.2% of mothers know at least what MTCT means, which is higher than studies in India 81.2%, Uganda 80%, Nigeria,Osogbo 80%, Arba Minch, Ethiopia 80%(11, 25-27), in South Africa 78%, China 64%,Sagamu 74.5% and kano 61%, Nigeria(8, 9, 12, 28). But lower than studies done in Addis Ababa, Hawassa Referral Hospitals and Gondar town, 89.8%,90.1%, 88.5%,respectively(15, 16, 29). This inconsistence might be due to the study settings, most of them used Hospital based studies.

Good Knowledge of mothers on MTCT of HIV among pregnant women significantly varied with their residents. In this study, 85.4% of women reside in rural area. Being urban in the existing study was associated with good knowledge of women on MTCT of HIV. Pregnant mothers in the urban residents were three times more likely have good knowledge than women in the rural. It is in line with study done in Hawassa referral hospital and Gondar town among women attending in antenatal follow up care (15, 16). It might be due to geographical inaccessibility and availability of nearby health services and health care providers.

Education makes a difference on the knowledge of individuals about mother to child transmission of HIV. It shows a significant association between the educational level and good knowledge of mothers on MTCT of HIV, women who able to read & write were three times more likely knowledgeable than that of unable to read and write. It supports the government exercise attempting to address “adult informal education”. Women with primary education also have two times more likely knowledgeable than those who have unable to read & write. It is in line with previous study conducted in southern Ethiopia (13). In contrast a study in Nigeria, at the antenatal clinic of Federal Medical Center, Ido Ekiti, there was no any difference between good knowledge of MTCT of HIV and education (30). Even though ability to read and write is better for easily understanding of about means of HIV transmission, a significant number of women 32.5% still not able to read and write. The value of ministry of education at this level may be a tremendous contribution.

In this study, women who have discussed and received information about HIV/AIDS with health care providers were shown a positive association. Pregnant women received information about HIV three times more likely knowledgeable than those who have not received. Sixty four percent of women in the district have got HIV information from health professionals; it is higher than a study in China 25%, in Sagamu, Nigeria 32.9%, lower in Hawassa referral hospital 67.7% (8, 15, 28).This may be the effort of both urban and rural health extension workers and highly increasing of accelerated midwifes. It makes great amazing parts of achievement of the objectives of Health Sector Development Plan IV and the four, five and six Millennium Development Goals (31). Unlike this, there are considerable number of women still have not received information about HIV (36.2%) by health care providers.

Male partner discussion with pregnant mother on antenatal care follow up showed as a strong predictor of the good knowledge of mothers on mother to child transmission of the disease in this study. Considering male partner contribution as a source of ANC information and discussion about these indicate a positive association with the women's good knowledge of MTCT of HIV. Pregnant mother's having discussion with their partners six times more likely knowledgeable than that of not having discussion. A study in Southern Ethiopia showed that being pregnant women discussed with their partners about ANC have been good knowledge of HIV by 70% than those who have no discussion (13). Sixty six percent of respondents discussed about ANC with their partners. It is higher than a study in Nigeria, osogbo,10% (26).

Women might have gotten information from different sources about variety of health services. Husbands as a means of delivery of information and discussion about MTCT of HIV (40.6%) with spouses have shown statistical significant association with good knowledge of mother to child transmission of HIV. This may be due to that fear of male partners about the transfer of an unkind wealthy to their new off springs. A study in Southern Ethiopia showed that being pregnant women discussed with their partners about MTCT have been good knowledge of HIV by 66% than those who have no discussion (13). When comparing male partner discussion with pregnant women more partner involvement on ANC and lower on MTCT this may be the consideration of immediate problem during labor time. On the other way may be the women's decision making ability brings this discrepancy, women may depend on their husbands in relative to health service information.

Concerning about the general sources of information on HIV/AIDS to this particular study population were health professionals, partners, relatives/friends, mass media and religious leaders were the major sources of disseminations of knowledge with different levels. The highest source in this study was health care provider and mass media the second, partners the third one. Health education through different media has not any substitution to increase knowledge of the mothers live in a resource constrain countries like Ethiopia.

Regarding misconception about HIV/AIDS transmission, 12.2% of the study participants respond as a possibility of HIV transmission through mosquito bite, 94.3% of them knew

no HIV transmission by sharing of meal with people having the virus, 84.7% of them know that reduction of HIV acquisition by living with partner who is uninfected and not having other sexual partner, 88% respond a healthy looking individual may have HIV, and 88.4% of the respondents know the prevention of HIV virus transmission by using condom during every sexual act. Among respondents 63.8% have comprehensive knowledge about HIV/AIDS. higher than that of a cross-sectional study in Yaoundé 23% (32), reports of Ethiopian Demographic and health survey 19%,and a study in Gondar town 59.8% (16, 33). But still 66 individuals in the study population thought mosquito bite as one means of HIV transmission. Therefore, consistent health education program needed at grass root level.

6. Strength and limitation of the study

6.1. Strength

-This study addresses pregnant women who couldn't attend health care facility for ANC and HIV screening by their intension and measure their knowledge about MTCT of HIV.

6.2. Limitation of the study

- Because of financial and time constraints, this study not includes the knowledge part of prevention of mother to child transmission of HIV.

7. Conclusion and Recommendation

7.1. Conclusion

Despite efforts from different corners the knowledge of pregnant mothers on mother-to-child transmission of HIV is low. Women with rural settlements where far from reachable for health care providers were made them inaccessible to essential health services like health education. Even women those who have unable to read and write can't easily understand messages from different media and it worsen if mothers who have no discussion with their partners about antenatal care and mother to child transmission of HIV. The factors associated with the knowledge of mothers on mother-to-child transmission of HIV were resident of mothers, educational status, received information on HIV from health care providers and, presence of discussion on mother-to-child transmission of HIV, antenatal care with their partners.

7.2. Recommendation

Recommendation to local health and education authorities:

1. Intensified awareness creation efforts to increase the level of knowledge of pregnant women on mother to child transmission of HIV.

2. Motivate the health care providers and improving the health care facilities for consistent health education program.

3. Strengthen adult informal education including women by reaching inaccessible parts of the community is advisable.

Recommendation to health care providers:

1. Strengthen health education program at community level with integration of HIV, MTCT, ANC and breast feeding.

2. The provision of any health services in relation to mothers with her child should consider with male involvement.

Recommendation for researcher:

1. Because of financial and time constraints, this study not includes the knowledge questions on the prevention of mother to child transmission of HIV; the next researchers shall be considering it.

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Annexes

Annex 1: English version interviewer administered questionnaire

Questionnaire on Knowledge of mother to child transmission of HIV and associated factors among pregnant women in Meket District, Northeast Ethiopia,2014

The interviewee includes pregnant women who live within ten kebles in the District at least for six months.

INTRODUCTION

Hello! My name is and I am working as a data collector in a cross sectional survey of knowledge of mothers on mother to child transmission of HIV and associated factors among pregnant women in Meket District, Northeast Ethiopia, 2014run with Gondar University, Institute of Public Health and Meket District permission. There is no any direct incentive because of your participation. But information from you is basic for Meket population. We are conducting a survey to improve health services for maternal

and child health. We would like to ask you a few questions about the knowledge you have on mother to child transmission of HIV. So we need your voluntary participation to answer the questions because your opinions are very important to us. Your answers being kept confidential and your name will not be written on the survey questionnaire so there was no possibility to know any individual about your identity. And we use a password with our computer. Your participation in this study is voluntary and you can withdraw from the interview at any moment without any negative consequences for you. The questions take about 30-40 minutes of your time.

Do you have any questions?

Do you agree to participate in this survey? ____Yes _____No

Part I: General information

001. Questionnaire code……002. Name of the Keble……

Part II: Socio –Demographic characteristics

N^{o}	Questions	Response
201	Age	In year ----------
202	Residence	1.Rural 2.Urban
203	Religion	1. Orthodox 2. Muslim 3. Protestant 4. catholic 5. Others
204	Marital status	1. Married 2. Single 3. Divorced 4. Widowed 5. separated
205	Educational status	1.Unable to read and write 2. Able to read and write 3. Primary school completed(1-8) 4. Secondary school completed(9-12) 5. College and above

206	What is your occupation?	1. House wife 2. Farmer 3. Student 4. Merchant 5. Government Employed 6. Daily laborer 7. Others ----------
207	How much is your Monthly income?	1. Salary in month (ETB)---------- 2. Income in kind---------- ----------
208	Household family size?	----------in number

Part III: Questions about general information and knowledge about HIV/AIDS

S. No	Questions	Category	Code
301	Have you ever heard of HIV or disease AIDS?	1. Yes 2. No	
302	Where did you get information about HIV/AIDS?	1.husband 2.health professional 3.religious leader 4. relative /friends 5.mass media(radio, TV, magazines) 6.Other----------	
303	Can HIV/AIDS transmitted from person to person?	1. Yes 2. No 88. I don't know	If the answer is no, go to Q. 705
304	If the answer for question number 203 is yes by what means it transmitted?	1. sexual intercourse 2. blood transfusion	

		3. sharing of sharp objects 4. from mother to child transmission 5. others --------	
305	Can a healthy looking individual transmit HIV?	1. Yes 2. No 88. I don't know	
306	Can people reduce their chance of getting the AIDS virus by having just one sexual partner who is not infected and who has no other partner?	1. Yes 2. No 88. I don't know	
307	Can people get the HIV/AIDS virus from mosquito bite?	1. Yes 2. No 88. I don't know	
308	Can a person get HIV by sharing a meal with someone who is Infected with HIV?	1. Yes 2. No 88. I don't know	

Part IV: Questions about knowledge of mothers on MTCT of HIV

S.N^{o}	questions	answer	code
401	Is it possible a pregnant woman infected with HIV virus?	1.Yes 2.No 88. I don't know	
402	Can pregnant woman living with HIV/AIDS transmit the virus to the baby during pregnancy?	1.Yes 2.No	
403	Can pregnant woman living with HIV/AIDS transmit the virus to the baby during labor and child birth?	1.Yes 2.No	

404	Can pregnant woman living with HIV/AIDS transmit the virus to the baby during breast feeding?	1.Yes 2.No	

Part VI: Questions on provider-initiated HIV testing and counseling (PITC) of pregnant women

s.no	questions	Answers	Code
601	Have you ever heard about the provider-initiated HIV testing and counseling?	1.Yes 2.No	
602	Do you think provider-initiated HIV testing and counseling (PITC) is important for pregnant women?	1.Yes 2.No 88.I don't know	
603	Have you ever had PITC in this pregnancy?	1.Yes 2.No	If the answer is no, go to Q. 705
604	Which method of testing do you prefer	1.Confedential linked testing 2.Anonymous 3.Other	
605	Which way do you prefer to obtain HIV test result?	1.Face-to-face(verbally) 2.secretive letter 3.Through relative(parents) 4.Telephone 5.Other specify	
606	Did you receive counseling after getting your result?	1.Yes 2.No 88.I don't know	
607	Would you discuss with your partner before	1.Yes 2.No	

	having HIV test?		
608	Would you tell your partner the test result of an HIV/AIDS	1.Yes 2.No 88.I don't know	

Part VII: Questions related with male involvement, discussion and support about pregnancy, antenatal care follow up

701	Number of pregnancy including the current one?	1.One 2.Two 3.Three 4.Four 5.five and above	
702	How many months pregnant are you?	……in months	
703	Have you any visit for the present pregnancy?	1. Yes 2. No	If the answer is no, go to Q. 705
704	If yes, How many visits have you done for the antenatal visit?	1.One 2.Two 3.Three 4.Four and above	
705	How many months pregnancy were you during your first antenatal visit?	……..in months	
706	Which information do you received from health professional during ANC?	1.About HIV 2.About MTCT 3.ANC 4. Infant feeding	
707	Did the current pregnancy needed by your husband?	1.yes 2.No	
708	Did your husband go with you during antenatal care follow up?	1.yes 2.No	
709	Did you discuss with your husband about the current pregnancy?	1.yes 2.No	

710	Which information would you discuss with your partner?	1.About HIV 2.About MTCT 3.About ANC 4. Infant feeding	

Thank you for your time!

Interviewer name……Sign…… ……..Date ……

Supervisor: Name……..Sign……Date……

Annex 2: Amharic version questionnaire

ነፍሰጡ የሆኑ እናቶች ኤች አይ ቪ ቫይረስ ከእናት ወደ ልጅ መቸ መቸ(በምን ጊዜ) እንደሚተላለፍ እና ስለተያያዥ ጉዳዮች ያላቸዉን እዉቀት ለመለካት የተዘጋጀ መጠይቅ ነዉ። መጠይቁ በመቄት ወረዳ ስር በሚገኙ 12 ቀበሌዎች የሚኖሩ ነፍሰጡር እናቶችን ያካትታል።

<u>የስምምነት ቃል</u>

ጤና ይስጥልኝ፤ ስሜ በመቄት ወረዳ አስተዳደር ስር ባሉ ቀበሌዎች የሚገኙ ነፍሰ ጡር የሆኑ እናቶች ኤች አይ ቪ ከእናት ወደልጅ መቸ መቸ(በምን ጊዜ) እንደሚተላለፍ እና ስለተያያዥ ጉዳዮች ያላቸዉን እዉቀት ለመለካት በሚደረግ ጥናት ከመጋቢት 08/06-21/06 ዓ.ም መረጃ ሰብሳቢ ነኝ።

ጥናቱም በጎንደር ዩኒቨርሲቲ የህ/ሰብ ጤና አጠባበቅ ትምህርት ቤት እና በመቄት ወረዳ ጤና ጥበቃ ጽ/ቤት እዉቅና የሚሰራ ነው። በቅድሚያ ስለሚያደርጉልን ትብብር ምስጋናችን ከልብ የመነጨ ነዉ።ምንም እንኳ በጥናቱ በመሳተፈዎ የሚያገኙት የተለየ ጥቅም ባይኖረዉም ነገር ግን የሚሰጡን መረጃ ወደፊት ነፍሰጡር እናቶች ስለኤች አይ ቪ፤ኤችአይ ቪ ቫየረስ ከእናት ወደ ልጅ የሚተላለፈዉ መቸ መቸ(በምን ጊዜ) ነዉ ለሚለዉ እናቶች በሶስቱም(በእርግዝና ፤ በወሊድና በጡት ማጥባት) የመተላለፊያ ወቅቶች እንዲሁም ቫይረሱ እንዳይተላለፍ መከላከል በሚሉት ዙሪያ የሚኖራቸዉን እዉቀት ከፍ እንዲል ያደርጋል።በመሆኑም የእርሰዎ ሃሳብ በጣም ጠቃሚ በመሆኑ በዚህ ጥናት እንዲሳተፉ በተስፋ ይጠበቃሉ። የተናገሩት ሁሉ በሚስጥር እንዲያዝ ይሆናል ስመዎንም መናገር አያስፈልገዎትም። ምንአልባትም መጠይቁን ሲጠየቁ የተወሰነ ጊዜ የምንሻማ ቢሆንም ለእርሰዎ አስቸጋሪ መስሎ የሚታየዎ ጉዳይ ቢኖር በየትኛውም ጊዜ ያለምንም ቅድመ ሁኔታ መጠይቁን ሳይሞሉ ወይንም አቋርጠው መሄድ ይችላሉ። ይህን ጥናት በተመለከተ የትኛዉም አይነት ጥያቄ ቢኖረዎ ዋናውን ተመራማሪ **አቶ ተስፋየ ብርሀንን 0934577025** ደውለው መጠየቅ ይችላሉ። ለመሆኑ ስለቃለመጠይቁ ዓላማና ይዘት የሚያነሱት ጥያቄ አለን?

በሃሳቡስ ተስማምተዋል? ----------አልተስማሙም?----------

ምላሹ ተስማምቻለሁ ከሆነ በጥናቱ የሚሳተፉ ነፍሰጡር እናቶች የቃል ስምምነቱን የተቀበሉ በመሆኑ ጥያቄዎቹን መጠየቅ ጀምሪ፡፡

ክፍል 1:- <u>አጠቃላይ ኢንፎርሜሽን</u>

ı. መጠይቁ መለያ ቁጥር ----------002. የቀበሌዉ ስም ----------

ክፍል 2:- ማህበራዊና ስነ- ህዝብ ገጽታዎች

ትዕዛዝ፡- ከዚህ በታች ከተዘረዘሩት ጥያቄዎች መልስ ይሆናል የሚሉትን በመምረጥ መልሱን ያክቡ ወይም ይፃፉ፡፡

ተ.ቁ	ጥያቄ	ምርጫ
201	እድሜ	----------በዓመት
202	የመኖሪያ አካባቢ	1. ከተማ 2. ገጠር
203	ሐይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3.ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ከሆነ ይጠቀስ----------
204	የጋብቻ ሁኔታ	1. ያገባች 2. ያላገባች 3. የፈታች 4. ባል የሞተባት 5. ተለያይተዉ የሚኖሩ
205	የትምህርት ደረጃ	1. ማንበብ መፃፍ ያልቻለች 2. ማንበብ መፃፍ የምትችል 3. 1ኛ ደረጃ ያጠናቀች 4. 2ኛ ደረጃ ያጠናቀቀች 5. ኮሌጅ እና ከዛ በላይ

206	ስራዎ ምንድን ነው?	1. የቤት እመቤት 2. አርሶ አደር 3. ተማሪ 4. ነጋዴ 5. የመንግስት ሰራተኛ 6. የቀን ሰራተኛ 7. የግል ስራ
207	በአሁኑ ጊዜ የወር ገቢዎ ምን ያህል ነዉ?	1.የወር ደመወዝ በኢትዮጵያ ብር---------- 2.ደመወዝ ከሌለ በአይነት---------- ----------
208	በቤተዎ ስንት የቤተሰብ አባላት ይኖራሉ?	----------በቁጥር

ክፍል -3:- ነፍሰጡር እናቶች አጠቃላይ ስለ ኤች አይ ቪ/ ኤድስ የሚኖራቸዉን እዉቀት የሚለኩ መጠይቆች

ተ.ቁ	ጥያቄ	ምርጫ	መለያ
301	ኤች አይ ቪ/ ኤድስ ስለሚባለዉ በሽታ ሰምተዉ ያዉቃሉ?	1. አዎ 2. አልሰማሁም	
302	ስለኤች አይ ቪ/ኤድስ መረጃ ያገኙት ከየት ነዉ ?	1. ከትዳር አጋር 2. ከጤና ባለሙያ 3. ከሀይማኖት መሪ 4. ከቤተሰብ/ከጓደኛ 5. ከብዙሃን መገናኛ (ራዲዮ፣ቴሌቪዥን፤ጽሁፍ በማንበብ) 6. ሌላ----------	
303	ኤች አይ ቪ ቫይረስ ከሰዉ ወደ ሰዉ መተላለፍ ይችላል?	1. አዎ 2. አይተላለፍም 88. አላዉቅም	መልሰዎ የለም ከሆነ ወደ 305
304	ለተራቁጥር 203 መልአዎ አዎ ከሆነ የመተላለፊያ መንገዶቹን ይጥቀሱ?	1. በግብረ-ስጋ ግንኙነት 2. በቫየረሱ በተበከለ ደም 3. በስለታም ነገሮች በጋራ በመጠቀም 4. ከእናት ወደልጅ	

		5. ሌላ ካለ ይጥቀሱ--------	
305	ጤናማ መስሎ የሚታይ ሰዉ የኤቸ አይ ቪ ቫይረስ ሊኖርበት ይችላል?	1. አዎ 2. የለም	
306	ሰዎች በኤድስ በሽታ ያልተያዘና ሌላ ጓደኛ የሌለዉ(ላት) አንድ የወሲብ ጓደኛ ብቻ ጋር አብሮ በመኖር በኤድስ ቫይረስ የመያዝ እድላቸዉን መቀነስ ይችላሉ?	1.አዎ 2.አይችሉም 3.አላዉቅም	
307	ሰዎች በወባ ትንኝ በመነደፋቸዉ ኤች አይ ቪ/ኤድስ ሊይዛቸዉ ይችላል?	1. አዎ 2. አይዛቸዉም 88. አላዉቅም	
308	ሰዎች የኤድስ ቫይረስ በደሙ አለ ከተባለ ግለሰብ ጋር አብረዉ በመብላታቸዉ በቫይረሱ ይያዛሉ?	1. አዎ 2. ሊያዙ አይችልም 88. አላዉቅም	

ክፍል 4፡ ነፍሰ ጡር እናቶች ስለኤች አይ ቪ ቫይረስ ከእናት ወደልጅ መተላለፍ ያላቸዉን እዉቀት የሚለኩ መጠይቆች

ተ.ቁ	ጥያቄ	ምርጫ	መለያ
401	ኤች አይ ቪ ቫይረስ በደሚ ዉስጥ ያለ እናት ቫይረሱ ወደልጇ ሊተላለፍ ይችላል	1.አዎ 2. አይተላለፍም 3. አላዉቅም	
402	ኤች አይቪ ቫይረስ በደሚ ዉስጥ ያለ እናት ቫይረሱ በማህጸኗ ወዳለ ጽንስ በእርግዝና ጊዜ ሊተላለፍ ይችላል?	1.አዎ 2. አይተላለፍም	
403	ኤች አይቪ ቫይረስ በደሚ ዉስጥ ያለ እናት ቫይረሱ በምጥ(በወሊድ) ጊዜ ወደልጇ ሊተላለፍ ይችላል?	1.አዎ 2. አይተላለፍም	
404	ኤች አይቪ ቫይረስ በደሚ ያለ እናት ቫይረሱ በጡት ማጥባት ጊዜ ወደልጇ ሊተላለፍ ይችላል?	1.አዎ 2. አይተላለፍም	

ክፍል-6፡ በባለሙያ አነሳሽነት የኤች አይ ቪ የደም ምርመራና የምክር አገልግሎት ለነፍሰጡር እናቶች የቀረቡ መጠይቆች

ተ.ቁ	ጥያቄዎች	መልስ	ኮድ
601	በባለሙያ አነሳሽነት የኤች አይ ቪ የደም ምርመራና የምክር አገልግሎት ሰምተዉ ያዉቃሉ?	1.አዎ 2.የለም	
602	በባለሙያ አነሳሽነት የኤች አይ ቪ የደም ምርመራና የምክር	1.አዎ 2.የለም	

	አገልግሎት ለነፍሰ ጡር እናቶች ጠቃሚ ነዉ ይላሉ?	88.አላዉቅም	
603	በባለሙያ አነሳሽነት የኤች አይ ቪ የደም ምርመራና የምክር አገልግሎት ተደርጎለዎት ያዉቃሉ?	1.አዎ 2.የለም	መልሰዎ የለም ከሆነ ወደ 605
604	የኤ አይ ቪ የደም ምርመራና የምክር አገልግሎን በተመለከተ የቱን የምርመራ አይነት ይመርጣሉ?	1.ስም ተጠቅሶ በሚስጥር 2.ስምየማይገለጽበትን 3.ሌላ----------	
605	የኤች አይ ቪ የደም ምርመራ ዉጤተዎን ለመስማት በምን አይነት መንገድ ቢሆን ይመርጣሉ?	1. ፊትለፊት 2.በሚስጥራዊ በደብዳቤ 3. በዘመድ/በጓደኛ አማካኝነት 4.በስልክ 5. ሌላ ይጠቀስ----------	
606	የኤች አይ ቪ የምክርና የደም ምርመራ አድርገዉ ዉጤተዎን እንደተነገሩ የምክር አገልግሎት አግኝተዉ ነበር?	1.አዎ 2.የለም 88.አላዉቅም	
607	የምክርና የደም ምርመራ ከማድረገዎ በፊት ከትዳር አጋረዎ ጋር ተዎያይተዉ ነበር?	1.አዎ 2.የለም	
608	ዉጤተዎንስ ለትዳር አጋረዎ ነግረዉ ነበር?	1.አዎ 2.የለም	

ክፍል-7፡ ስለእርግዝና ፤ ከእርግዝና ጋር በተያያዙ ጉዳዮች ከትዳር አጋር ስለሚኖር መወያየትና ድጋፍ በተመለከተ የቀረቡ መጠይቆች

ተ.ቁ	ጥያቄ	መልስ	
701	የእርግዝና ቁጥር የአሁኑን ጨምሮ?	1.አንድ 2.ሁለት 3.ሶስት 4.አራት 5.አምስትና ከዚያ በላይ	
702	የአሁኑ እርግዝናዎ ስንተኛ ወር ሆኖታል?	----------በወር	
703	ለአሀኑ እርግዝና ክትትል ጤና ድርጅት ሄደዉ ያዉቃሉ?	1.አወ 2.አልሄድኩም	መልሰዎ የለም ከሆነ ወደ 705

704	ለጥያቄ 503 መልሰዎ አዎ ከሆነ ለስንተኛ ጊዜ ለእርግዝና መርመራ ሄዱ?	1.አንድ ጊዜ 2.ሁለት ጊዜ 3.ሶስት ጊዜ 4.አራት ጊዜና ከዚያ በላይ	
705	ለእርግዝና ክትትል(ምርመራ) ለመጀመሪያ ጊዜ ሲሄዱ እርግዝናዎ ስንተኛ ወሩ ነበር?	----------በቁጥር	
706	በጤና ተቋም የእርግዝና ክትትል ሲያደርጉ ምን ምን መረጃዎችን አገኙ?	1.ስለነፍሰ ጡር ክትትል 2.ስልአጠቃላይ የኤች አይ ቪ 3.ኤች አይ ቪ ከእናት ወደልጅመተላለፉ 4.ስለህጻናት አመጋገብ	
707	እርግዝናዉን የትዳር አጋረዎ ይፈልገዋል?	1.አዎ 2. አይፈልገዉም	
708	ወደ ጤና ድርጅት ለእርግዝና ምርመራ ሲሄዱ የትዳር አጋረዎ አብሮዎት ይሄዳል?	1.አዎ 2.አናደርግም	
709	ስለአሁኑ እርግዝናዎ ከትዳር አጋረዎ ጋር ወይይት አድርገዉ ያዉቃሉ?	1.አዎ 2.የለም	
710	ከትዳር አጋረዎ ጋር ሲወያይዩ ምን ምን መረጃዎችን አገኙ?	1.ስለእርግዝና ክትትል 2.ስለኤች አይ ቪ 3.ኤች አይ ቪ ከእናት ወደልጅ መተላለፍ 4.ስለህጻናት አመጋገብ	

ጥያቄየን ጨርሻለሁ፡፡ ላደረጉልኝ ትብብርም ከልብ አመሰግናለሁ!!

የቃለመጠይቅ አድራጊዉ ስም…….ፊርማ……ቀን……/……/……..

ያረጋገጠዉ ሱፐርቫይዘር ስም…….ፊርማ……ቀን……/……/……

Annex 3: English information sheet

Information sheet and consent form for women participating on Knowledge of mother to child transmission of HIV and associated factors among pregnant women in Meket District, Northeast Ethiopia, 2014: community based cross-sectional study at District level of Meket, Amhara National Regional State.

UNIVERSITY OF GONDAR COLLEGE OF MEDICINE AND HEALTH SCIENCES INSTITUTE OF PUBLIC HEALTH

Name of investigator: Tesfaye Birhane

Name of the Advisors: Mr. Gizachew Assefa (Bsc, MPH)

Mr. Kefyalew Addis (Bsc, MPH)

Sponsor: Self Sponsor

Information sheet prepared for participants from Gondar Health Institute in a research project that studies on Knowledge of mother to child transmission of HIV and associated factors among pregnant women.

This information sheet is prepared by a research investigator whose main aim is to study the Knowledge of mother to child transmission of HIV and associated factors among pregnant women: community based cross-sectional study at District level of Meket, Amhara National Regional State. The investigator is the final year of MPH student from University of Gondar, College of Medicine and Health Science, Institute of Public Health.

Purpose: the purpose of this study is to study the Knowledge of mother to child transmission of HIV and associated factors among pregnant women with community level of Meket District, Amhara National Regional State. WHO promotes a four pronged

approach to reduce MTCT of HIV, the prevention of new infections in parents, avoiding unwanted pregnancies in HIV infected women, preventing transmission of HIV from an infected mother to her infant and care and support. But the knowledge of mothers on mother to child transmission of HIV is low. Timely interventions on the three possible periods (pregnancy, labor/delivery and breast feeding) can possibly reduce to 2- 5%. However, there are few institutional based studies in Ethiopia, despite no community based studies particularly in Meket District. The aim of the study on Knowledge of mother to child transmission of HIV and associated factors among pregnant women at community level of Meket District providing valuable information on factors which influence on mother's knowledge to mother to child transmission (MTCT) of HIVand PMTCT for health planners, implementers, the community itself and base line information for researchers.

Procedure: for Knowledge of mother to child transmission of HIV, participants will be invited to participate in this study, they need to understand and sign the agreement form. For this study participants are pregnant women in the selected kebles during the data collection period who will be interviewed through interview administered structured questionnaire. All the responses given by the participants and results obtained will be kept confidentially and no one will have access to their response except the principal investigator.

Risk and Discomfort: there is no risk other than a few minutes during the responding time about 20-30 minutes. But it is not much when comparing with its benefits of the contribution to the knowledge of MTCT.

Confidentiality: the information that will be collected from this research will be kept confidentially. Information about the participants that will be collected from the study will be stored in a file and will have a password to the computer which will not have the name of the participants on it and will not be revealed to anyone except the principal investigator.

Right to refuse or withdraw: the study participants have full right to refuse from participating in this research (parts or full questions) if they do not wish to participate and this will not affect their interest of treatment or any health services in in the public health institutions at any time and without losing of any of their right as a client in the health institutions.

Whom to contact: this research project will be received and approved by the Institutional Review Board (IRB) of Ethical Review Board (ERB), University of Gondar. If you want to know more information, you can contact the chairman of IRB----------

If you have any question about this research contact any of the following individuals and you may ask at any time you want:

1. Tesfaye Birhane (principal Investigator)

University of Gondar, Ethiopia.

Tel. 251934577025

2.Mr. Gizachew Assefa (Bsc, MPH)

- Institute of Public Health, Gondar University.

-tel. 251912009978

3. Mr. Kefyalew Addis (Bsc, MPH)

- Institute of Public Health, Gondar University.

-tel. 251920256699

Annex 4: Amharic information sheet

በአማራ ብሄራዊ ክልላዊ መንግስት በመቄት ወረዳ በሚደኙ ቀበሌዎች የሚኖሩ ነፍሰጡር እናቶች ከእናት ወደልጅ የኤች አይ ቪ ቫይረስ በእርግዝና፤ በወሊድና በጡት ማጥባት ጊዜ ስለመተላለፉ ያላቸዉን እዉቀት ለመለካት ምርምርና ጥናት ሲደረግ ለሚኖራቸዉ ተሳትፎና ትብብር የሚደረግ ስምምነት የተዘጋጀ መግለጫ ቅጽ፡፡

የጎንደር ዩኒቨርሲቲ የህክምና እና ጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና

አጠባበቅ ትምህርት ክፍል

የዋናዉ ተመራማሪ ስም፡ ተስፋዬ ብርሃን

የጥናቱ አማካሪዎች ስም፡ 1ኛ. አቶ ግዛቸዉ አሰፋ (Bsc, MPH)

2ኛ. አቶ ከፍያለዉ አዲስ (Bsc, MPH)

ስፖንሰር፡ በግል

ይህ ማብራሪያ የተዘጋጀዉ በጎንደር ዩኒቨርሲቲ ህክምናና ጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባበቅ ትምህርት ቤ/ት የድህረ ምረቃ ተማሪና አማካሪዎች አመካኝነት ነዉ፡፡

1.የጥናቱ እላማ፡

የዚህ ጥናት አላማ በመቄት ወረዳ ስር በሚገኙ ቀበሌዎች የሚኖሩ ነፍሰጡር እናቶች ከእናት ወደልጅ የኤች አይ ቪ ቫይረስ በእርግዝና፤ በወሊድና በጡት ማጥባት ጊዜ ስለመተላለፉ ያላቸዉን እዉቀት ለመለካትና ተያያዥ በሆኑ ዋናዋና ጉዳዮች ላይ ጥናት ማድረግ ነዉ፡፡ የአለም ጤና ድርጅት ኤች አይቢ ከእናት ወደ ልጅ መተላለፉን ለመቀነስ አራት ዋናዋና ተግባራትን አዘጋጅተል፡ እነዚህም አናቶች በኤች አይቢ እነዳይያዙ ማድረግ፤ ኤች አይ ቪ በደማቸዉ ያለ ደግሞ ያልተፈለገ እርግዝና እነዳይከሰትባቸዉ፤ እያለባቸዉ ከወለዱ ደግሞ የጸረ-ኤች አይ ቪ መድሃኒት እንዲዎስዱ እና ድጋፍና እንክብካቤ እንዲደረገላቸዉ የሚያደርግ መርሃ ግብር አዘጋጅተል፡፡ ነገር ግን እናቶች በዚህ ከእናት ወደ ልጅ መተላለፍ ላይ ያላቸዉ እዉቀት አናሳ ነዉ፡፡ በዚህም ላይ ወቅቱን የጠበቀ ተግባራዊ እርምጃ ቢወሰድ ከእናት ወደልጅ የመተላለፉን ሁኔታ ወደ 2-

5% ዝቅ ማድረግ ይቻላል፡፡ ቢሆንም ግን በዚህ ላይ በሃገራች ያለዉ ጥናት አናሳ ነዉ በተለይ እኔ ባለኝ መረጃ በዚህ ጉዳይ ላይ በመቄት ወረዳ የተጠና ጥናት የለም፡፡ ስለዚህ የጥናቱ አላማ በመቄት ወረዳ ስር በሚገኙ ቀበሌዎች የሚኖሩ ነፍሰጡር እናቶች ከእናት ወደልጅ የኤች አይ ቪ ቫይረስ በእርግዝና፤ በወሊድና በጡት ማጥባት ጊዜ ስለመተላለፉ ያላቸዉን እዉቀት ለመለካትና ተያያዥ በሆኑ ዋናዋና ጉዳዮች ላይ ጥናት ማድረግ እና ችግር የነበረዉን ምክንያት ማወቅ ነዉ፡፡ ስለሆነም የኤች አይ ቪ ቫይረስ ከነፍሰጡር እናቶች ወደልጅ በእርግዝና፤ በወሊድና በጡት ማጥባት ጊዜ ስለመተላለፉ በሚደረገዉ ጥናት እንዲሳተፉ ጋብዘነዎታል፡፡

በዚህ ጥናት ዉስጥ ለመሳተፍ ከተስማሙ ስምምነቱን መረዳትና ፈቃደኛእንዲሆኑ ይፈለጋል፡፡በዚህ ጥናት ሲሳተፉ መረጃ ሰብሳቢዉ የሚጠይቀዎትን ጥያቄ እንዲመልሱ ፈቃደኛነዎትን ይጠየቃል፡፡በዚህ ትናት የሚሳተፉ በመቄት ወረዳ ስር በሚገኙ ቀበሌዎች ያሉ ነፍሰጡር እናቶች ሚሆኑ የሚሰጡት መልስም ሆነ ማንኛዉም ነገር በሚስጥር የሚጠበቅ ይሆናል፡፡

2. ሊከሰቱ የሚችሉ ስጋቶችና የምቾት መጓደሎች፡ በዘህ ጥናት በመሳተፈዎ ምንአልባትም ጊዜዎን ልንሻማዎት ይችል ይሆናል ፡፡ነገር ግን የሚያጠፉት ጊዜ ለመቄት ወረዳ ህብረተሰብ ከሚሰጠዉ የጤና ጠቀሜታ ጋር ሲነጻጸር በጣም ዝቅተኛ ነዉ፡፡ በመሳተፈዎም ምንም አይነት ችግር አይገጥመዎትም፡፡

3. ጠቅሞች፡ በዚህጥናት በመሳተፈዎ የተለየ ጥቅም አያገኙም፡፡ ነገር ግን የአርሰዎ በጥናቱ ላይ መሳተፍ ነፍሰጡር እናቶች ከእናት ወደልጅ የኤች አይ ቪ ቫይረስ በእርግዝና፤ በወሊድና በጡት ማጥባት ጊዜ ስለመተላለፉ ያላቸዉን እዉቀት በተገቢዉ ደረጃ እንዳይደርስ የሆነበትን ምክንያት እንድንገነዘብ የሚያደርገንና ለችግሮቹ መፍትሄ ለማፈላለግ ለሚመለከታቸዉ አካለት የምናስገነዝብበት መረጃ ሆኖ ያገለግላል፡፡

4. ማካካሻ፡ በዚህ ጥናት ለመሳተፈዎ ምንም አይነት ማካካሻ አይሰጠዎትም ፡፡ ነገር ግን ከጥናቱ ዉጤት በመነሳት ከሚመጡ የመፍትሄ እርምጋዎች ተጠቃሚ ይሆናሉ፡፡ ለተሳትፎዎትም ምስጋናችን ከፍ ያለ ነዉ፡፡

5. ሚስጥር ሰለመጠበቅ፡ የሚሰጡን መረጃ ሁሉ በሚስጥር የተጠበቀ ይሆናል፡፡ ለዚህ ጥናት የሚሰበሰበዉ እርሰዎን የሚመለከት መረጃ በማህደር የሚቀመጥ ሲሆን ማህደሩ በእርሰዎ ስም ሳይሆን በተለየ ኮድ የሚቀመጥ ይሆናል፡፡ መረጃዉም ከዋናዉ ተመራማሪ በስተቀር ለማንም አይገለጽም፡፡

6. በጥነቱ ያለመሳተፍ ወይም እራስን ከጥናቱ የማግለል መብት፡

በትናቱ ላለመሳተፍ ከፈለጉ በዚህ ጥናት ያለመሳተፍ ወይም በከፊል ጠያቄዎችን አለመመለስ ይችላሉ፡፡በዚህ ጥናት ባለመሳተፈዎ ወይም ባለመመለሰዎ የሚያጡት ህክምና ወይም የጤና አገልግሎት አይኖርም፡፡

7.መረጃ ሥለማግኘት፡

ይህ ጥናት በጎንደር ዩኒበርሲቲ ጥናትና ምርምር የስነ-ምግባር ኮመቴ ድጋፍ አግኝቶል፡፡ የእነዚህ ኮሚቴዎች ስራ የጥናቱ ተሳታፊዎች ከጉዳት መጠበቃቸዉን ማረጋገጥ ነዉ፡፡ ጥያቄ ካለዎት ከዚህ በታች ከተዘረዘሩት ሰዎች መካከል በሚፈልጉት ጊዜ ማነጋገር ይችላሉ፡፡

1ኛ.ተስፋዬ ብርሃን

ጎንደር ዩኒበርሲቲ ፤ኢትዮጵያ

ስልክ፡ 0251934577025

2ኛ. አቶ ግዛቸዉ አሰፋ (Bsc, MPH)

ጎንደር ዩኒበረሲቲ ህክምናና ጤና ሳይንስ ኮሌጅ.

ስልክ. 251912009978

3. አቶ ከፍያለዉ አዲስ (Bsc, MPH)

- ጎንደር ዩኒበረሲቲ ህክምናና ጤና ሳይንስ ኮሌጅ.

-ስልክ. 251920256699

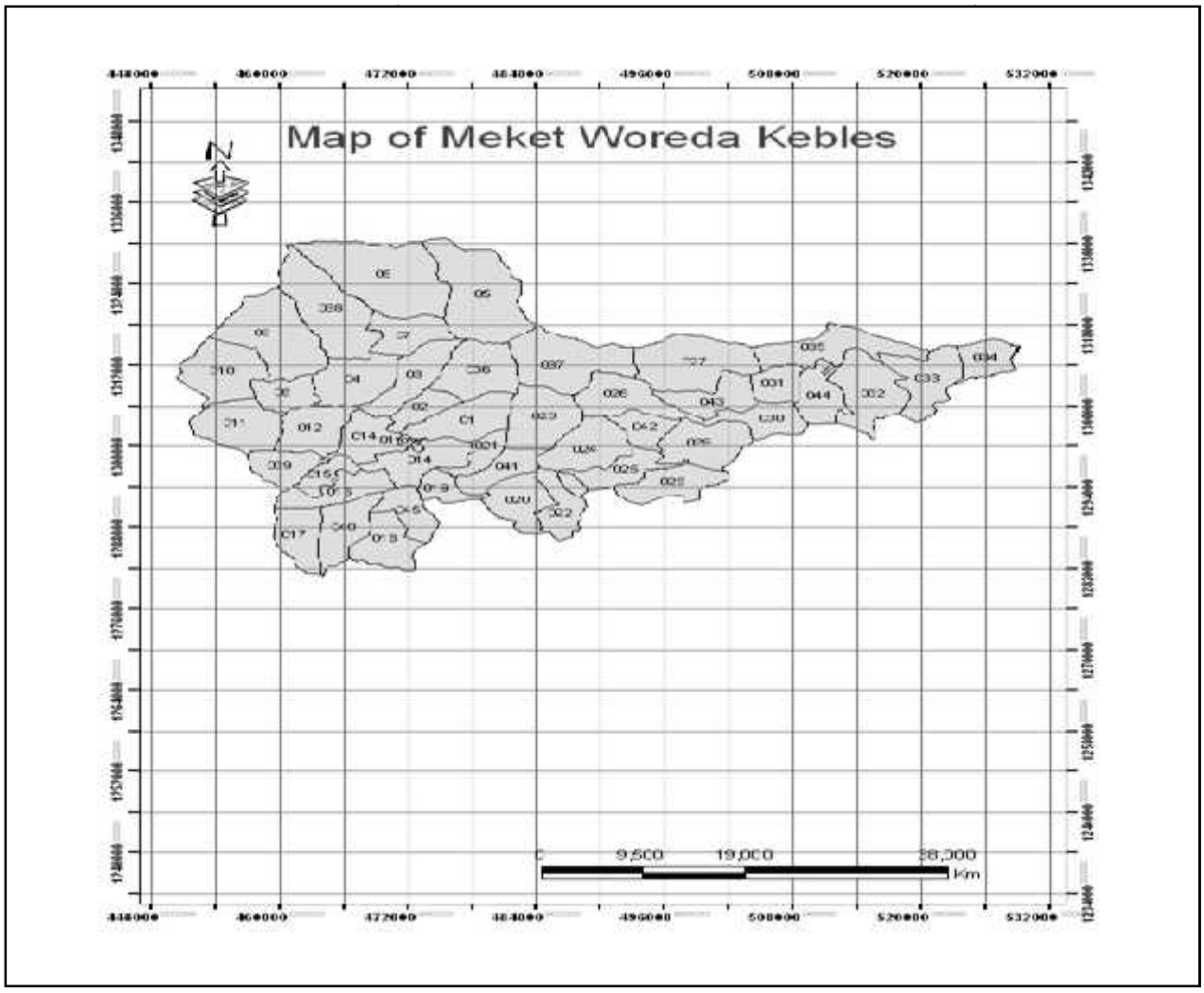

Figure 4: Map of study area, Meket District 2014 (Source: Zonal Health Department and Meket District Health Office).

Annex 5: Declaration sheet

I, the undersigned, senior MPH-RH student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of Science in MPH-RH.

Investigator Name: Tesfaye Birhane Tegegne (BSc) Signature ----------

Date ----/----/----

Place of submission: University of Gondar, College of Medicine and Health Sciences, Institute of public Health.

This thesis work submitted for examination with my/our approval as university advisor(s).

Advisors

Name **Signature** **Date**

1. Mr. Gizachew Assefa (Bsc, MPH)---------- ---/----/----
2. Mr. Kefyalew Addis (Bsc, MPH)---------- ---/----/----